CLAIM AMENDMENTS

IN THE CLAIMS

This listing of the claims will replace all prior versions, and listing, of claims in the application or previous response to office action:

Claims 1-16. (Canceled)

17. **(Currently Amended)** Control system for an internal combustion engine with a nitrogen oxide sensor and a **first** connecting line for transmission of data from the sensor ~~via an interface~~ to an evaluating unit **forming a part of an interface** for digitization of the data, and with a **second** connecting line for transmission of the digitized data from the evaluating unit to an engine control device, characterized in that:

the interface is a plug connector having a housing, wherein the evaluating unit is integrated into the housing.

18. (Previously Presented) Control system according to Claim 17, characterized in that the plug connector has an electrically conductive housing to shield the evaluating unit.

19. **(Currently Amended)** Control system according to Claim 17, characterized in that the plug connector or a ~~mating plug~~ **corresponding female** connector ~~corresponding to it~~ has a cooling flange or a cooling surface with a thermal connection to at least one output component of the evaluating unit.

20. (Previously Presented) Control system according to Claim 17, characterized in that the sensor is an exhaust gas sensor.

21. (Previously Presented) Control system according to Claim 17, characterized in that the interface and the electrical connecting line to the sensor are moisture-proof.

22. **(Currently Amended)** Control system according to Claim 17, characterized in that the **first** connecting line between the sensor and the interface is electromagnetically shielded.

23. **(Currently Amended)** Control system according to Claim 17, characterized in that the **second** connecting line to the engine control device is a system bus.

24. (Previously Presented) Control system according to Claim 23, characterized in that a number of sensors are connected with the control device via the system bus.

25. (Previously Presented) Control system according to Claim 17, characterized in that the evaluating unit has a microprocessor.

26. (Previously Presented) Control system according to Claim 25, characterized in that the microprocessor can be matched individually to the sensor with software.

27. (Previously Presented) Control system according to Claim 17, characterized in that heating of the sensor can be regulated by the evaluating unit.

Claim 28. **(Canceled)**

29. (Previously Presented) Control system according to Claim 17, characterized in that the interface is located closer to the sensor than to the engine control device.

30. **(Currently Amended)** An exhaust gas sensor for an internal combustion engine, comprising:

an exhaust gas probe electrically coupled to an interface, the sensor operable to transmit data to the interface via a connecting line; and

an evaluating unit forming a part of the interface, the evaluating unit operable to convert the data from the probe into a digital signal ~~such that the~~ **having a reduced** number of conductors on the interface ~~is reduced~~, wherein the interface comprises a plug connector having a housing such that the evaluating unit is integrated within the housing.

31. (Previously Presented) The exhaust gas sensor of Claim 30, further comprising an analog to digital converter forming a part of the evaluating unit.

32. (Previously Presented) The exhaust gas sensor of Claim 30, further comprising a generator forming a part of the evaluating unit, the generator operable to produce a test signal.

33. **(Currently Amended)** The exhaust gas sensor of Claim 30, further comprising a water-repellant membrane ~~**surrounding**~~ **in** the housing, the membrane operable to permit a supply of air through **[[the]] a** second connecting line.

34. (Previously Presented) The exhaust gas sensor of Claim 30, wherein the evaluating unit detects current of approximately 50 nanoamps (nA).

35. (Previously Presented) The exhaust gas sensor of Claim 30, wherein the sensor is operable to measure nitrogen oxide levels as low as ten parts per million (ppm).

36. (Previously Presented) The exhaust gas sensor of Claim 30, wherein the interface is located close to the sensor such that parasitic conductances or leakage resistances occur in the range of more than ten mega-ohm (MΩ).